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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,685	10/01/2004	Gary M Hieftje	29920-75460	2968

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EXAMINER	
VANORE, DAVID A	

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/500,685	HIEFTJE ET AL.	
	Examiner	Art Unit	
	David A. Vanore	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31,33,34,36 and 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31,33,34,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-31, 33-34, and 36-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In view of applicants' amendment to the claims and MPEP § 2173.05(b), claims 1-31, 33-34, and 36-37 have been rendered indefinite by addition of the term "type" to describe the claimed ion sources. For example, claim 1 has been amended to recite a first ionization source of a first type and a second ionization source of a second type, different from the first type. Since the newly added claim language has rendered the claims indefinite, the claims shall be interpreted as requiring first and second ionization sources as previously recited pending correction by applicant.

Response to Arguments

4. Applicant's arguments filed October 4, 2006 have been fully considered but they are not persuasive.

5. Applicant has amended the claims and argued that the prior art of Farnsworth and Naito fails to teach or suggest the claimed invention including the indefinite language added by the most recent amendment. The claims being interpreted without the newly added indefinite language, the rejection of claims 2 and 16 in view of Naito

and claims 1, 2, 6, 14, 16, 20, 28, 30, 31, 33, and 36 in view of Farnsworth under 35 USC § 102 is maintained.

6. Applicant's remarks regarding the rejection under 35 USC § 103 do not provide a persuasive argument towards the rationale for obviousness previously supplied and in the rejection of claims 5, 8-13, 19, 21-27, 34, and 37, Applicant does not address the Whitehouse and Farnsworth references as a whole with the rationale for obviousness supplied in the previous Office action. Rather, the consistent argument against the previously applied grounds for rejection is that the claims fail to teach the claimed invention as amended in the October 4, 2006 reply.

7. The arguments are not found persuasive, and in light of the indefinite language inserted by amendment, the previously applied rejection sustained.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 2 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Naito (USPN 3,886,357).

10. Naito teaches a mass spectrometer and method of operation where two different ion streams are coupled (Note Fig. 1) simultaneously and detected simultaneously (Col. 6 Lines 2-34) from different ion sources Items 1 and 2.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-2, 6, 14, 16, 20, 28, 30-31, 33, and 36 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Farnsworth (USPN 6,777,670).

13. Regarding claims 1-2, 16, and 30-31, Farnsworth teaches a mass spectrometer for the parallel processing of samples and method of operation where a sample is introduced to plural ionization sources (Items 57a through 57f) in an ionization array. These sources create plural beams (Items 90a through 90f) which are coupled to a mass filter array (Item 35) having plural channels for sorting ions by their respective mass to charge ratio (Col. 4 Lines 44-58), where the device further includes plural ion detectors (Items 42a through 42f) in ion detector array (Item 40) for the simultaneous generation of mass spectra based on detected ion data from the plural ion beams generated by the plural ion sources.

14. Regarding claims 6, 14, 20, 28, 33 and 36, Farnsworth teaches that the ion sources may be matrix assisted laser desorption ionization means or electrospray ionization means (Col. 4 Lines 16-43).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 3, 4, 15, 17, 18, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnsworth (USPN 6,777,670).

17. Farnsworth teaches all the required limitations of claims 2 and 16 as pointed out above.

18. Farnsworth fails to teach a mass selection means in the form of a time of flight mass spectrometer.

19. The mass selection means of Farnsworth (Item 35, described at Col. 5 for example) utilizes a plurality of ion selection chambers having a plurality of electrodes with potentials applied thereto to sort ions based on their mass to charge ratio.

20. The function of the mass selection means of Farnsworth and that of the instantly claimed time-of-flight mass spectrometer is the same in that both device are utilized to sort ions based on their mass to charge ratio.

21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a time of flight mass spectrometer as a mass selection means because the time of flight mass spectrometer is a notoriously well known mass selection device as employed in mass spectrometers.

22. Claims 5, 7, 8-13, 19, 21-27, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnsworth (USPN 6,777,670) in view of Whitehouse et al. (USPN 6,040,575).

23. Farnsworth teaches all the required limitations of 5, 7, 8-13, 19, 21-27, 34, and 37 as pointed out above.

24. Farnsworth fails to teach the use of electron impact or inductively coupled plasma ion sources as means for generating ions from a sample material as required in claims 5, 7, 8-13, 19, 21-27, 34, and 37.

25. Whitehouse et al. teaches the use of multiple types of ion sources selected from matrix assisted laser desorption ionization means, electrospray means, electron impact ionization means, and inductively coupled plasma ion sources depending on the type of sample to be analyzed (Col. 1 Lines 16-54).

26. Whitehouse et al. modifies the device and method of Farnsworth such that ions produced in the device of Farnsworth are produced by matrix assisted laser desorption ionization means, electrospray means, electron impact ionization means, or inductively coupled plasma ion sources as required by the material to be analyzed.

It would have been obvious to one having ordinary skill at the time the invention was made to apply any of the kinds of ion sources of Whitehouse et al. to the parallel mass analyzer of Farnsworth because such a combination would allow parallel processing of samples of different phase, such as solid, liquid, and gaseous samples, thus increasing the throughput of sample processing and increasing the number and types of samples which can be concurrently processed in Farnsworth.

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David A Vanore
Primary Examiner
Art Unit 2881

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DAVID VANORE
PRIMARY PATENT EXAMINER